

What Is Claimed Is:

- 1 1. A filtering induction device, comprising:
 - 2 a first flat coil formed by winding a first conductive strip
 - 3 to form a spiral having a plurality of circles, wherein the
 - 4 circles each have a first radius and are arranged layer by layer,
 - 5 wherein the first conductive strip has a first upper surface
 - 6 and a first lower surface, wherein the first conductive strip
 - 7 is covered with an isolation material and the first flat coil
 - 8 is used as an inductor;
 - 9 a second flat coil formed by winding a second conductive
 - 10 strip to form a spiral having a plurality of circles, wherein
 - 11 the circles each have a second radius and are arranged layer
 - 12 by layer, wherein each of the circles of the second conductive
 - 13 strip is wound between the first upper surface and the first
 - 14 lower surface, to serve as a capacitor; and
 - 15 a core structure coupled to the first flat coil and the second
 - 16 flat coil.
- 1 2. The filtering induction device of claim 1, wherein the
 - 2 core structure is further comprised of:
 - 3 a core base adapted to contain the first and second flat
 - 4 coils; and
 - 5 a core cover disposed on the core base.
- 1 3. The filtering induction device of claim 2, wherein a
 - 2 sidewall of the core base is provided with at least one opening,
 - 3 via which the first and second flat coils extending out from
 - 4 the core base.

1 4. The filtering induction device of claim 1, wherein a
2 terminal of the second flat coil is grounded.

1 5. The filtering induction device of claim 1, wherein the
2 thickness of the first flat coil is substantially equal to the
3 product of the thickness of the first conductive strip times
4 the number of the circles that the first conductive strip is
5 wound:

1 6. The filtering induction device of claim 1, wherein the
2 thickness of the second flat coil is substantially equal to the
3 product of the thickness of the second conductive strip times
4 the number of the circles that the second conductive strip is
5 wounded.

1 7. The filtering induction device of claim 1, wherein the
2 first conductive strip is wound such that the first upper
3 surface substantially faces the first lower surface parellelly.

1 8. The filtering induction device of claim 1, wherein the
2 second conductive strip is wound such that the second upper
3 surface substantially faces the second lower surface
4 parellelly.

1 9. A filtering induction device, comprising:
2 a first coil having a plurality of circles, wherein the first
3 coil is used as an inductor and is covered with an isolation
4 material;
5 a second coil having a plurality of circles interlacing with
6 the plurality of circles of the first coil; and

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7 a core structure coupled to the first and second coils.

1 10. The filtering induction device of claim 9, wherein the
2 first coil is a flat coil.

1 11. The filtering induction device of claim 9, wherein the
2 second coil is a flat coil.

1 12. The filtering induction device of claim 9, wherein the
2 core structure is further comprised of:

3 a core base adapted to contain the first and second coils;
4 and

5 a core cover disposed on the core base.

1 13. The filtering induction device of claim 12, wherein the
2 core base is provided with at least one opening on a sidewall
3 thereof, via which the first and second coils extend out from
4 the core base.

1 14. The filtering induction device of claim 9, wherein a
2 terminal of the second coil is grounded.